

CLAIMS

What is claimed is:

- 1 1. A heat sink, comprising:
2 a base structure comprising a protruding thermal interface having an
3 arcuate surface adapted to contact a processor assembly, wherein the arcuate
4 surface is adapted to accommodate a bent configuration of the base structure
5 induced by a mounting load applied to the base structure.

- 1 2. The heat sink set forth in claim 1, wherein the arcuate surface is
2 substantially flat in the bent configuration.

- 1 3. The heat sink set forth in claim 1, comprising a plurality of heat
2 transfer members extending from the base structure.

- 1 4. The heat sink set forth in claim 1, wherein the arcuate surface
2 comprises a semi-spherical surface.

- 1 5. The heat sink set forth in claim 1, wherein the arcuate surface
2 comprises a semi-cylindrical surface.

- 1 6. The heat sink set forth in claim 1, comprising a plurality of spring-
2 loaded fasteners coupled to the base structure.

1 7. The heat sink set forth in claim 1, comprising a threaded fastener
2 coupled to the base structure, wherein the threaded fastener comprises a dry
3 lubricant.

1 8. The heat sink set forth in claim 7, wherein the dry lubricant
2 comprises a molybdenum disulfide plating.

1 9. The heat sink set forth in claim 1, wherein the protruding thermal
2 interface comprises copper.

1 10. A system, comprising:
2 a circuit board comprising a plurality of chip contacts;
3 a processor package comprising a plurality of contacts aligned with the
4 plurality of chip contacts;
5 a heat sink comprising an arcuate surface extending from a base structure
6 of the heat sink, wherein the processor package is compressively
7 mounted between the circuit board and the arcuate surface.

1 11. The system set forth in claim 10, wherein the arcuate surface
2 comprises a curvature substantially flattened by a bent configuration of the base
3 structure.

1 12. The system set forth in claim 11, wherein the bent configuration is
2 induced by a mounting load applied to the heat sink.

1 13. The system set forth in claim 10, further comprising an electrical
2 interposer disposed between the processor package and the circuit board, wherein
3 the electrical interposer comprises a compressible electrical contact extending from
4 the plurality of contacts to the plurality of chip contacts.

1 14. The system set forth in claim 10, wherein the processor package
2 comprises a heat spreader, a substrate having the plurality of contacts, and a
3 processor disposed between the heat spreader and the substrate.

1 15. The system set forth in claim 14, wherein the heat spreader
2 overhangs a perimeter of the processor.

1 16. The system set forth in claim 10, comprising a plurality of spring-
2 loaded mounting fasteners coupled to the heat sink.

1 17. The system set forth in claim 10, comprising a plurality of threaded
2 mounting fasteners coupled to the heat sink, wherein threads of the plurality of
3 threaded mounting fasteners comprises a dry lubricant coating.

1 18. The system set forth in claim 10, comprising a thermal interface
2 material disposed between the arcuate surface and the processor package.

1 19. A method of processor mounting, comprising:
2 aligning an arcuate surface of a heat sink adjacent a surface of a processor
3 assembly; and
4 compressively mounting the processor assembly between the arcuate
5 surface and a circuit board.

1 20. The method set forth in claim 19, wherein aligning the arcuate
2 surface comprises centering a convex boss structure with a heat spreader of the
3 processor assembly.

1 21. The method set forth in claim 19, wherein compressively mounting
2 comprises bending the heat sink in a curvature opposite the arcuate surface.

1 22. The method set forth in claim 19, wherein compressively mounting
2 comprises substantially flattening the arcuate surface.

1 23. The method set forth in claim 19, comprising positioning a thermal
2 interface material between the arcuate surface and the surface of the processor
3 assembly.